Amendments to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A chemical compound or composition comprising a peptide, said ~~which~~ peptide comprising ~~comprises~~ a β-strand-forming section of peptide ~~which forms a β-strand having two edges~~, wherein:

(a) said β-strand-forming section of peptide comprises a peptide backbone and forms a β-strand having two edges , a first edge and a second edge, corresponding to opposite sides of said peptide backbone;

(b) said ~~a~~ first edge ~~which~~ associates with a target β-strand formed by a separate peptide-containing molecule; ~~, and a second edge, wherein~~

(c) said ~~the~~ β-strand-forming section of peptide comprises a sequence of at least four consecutive α-L-amino acid ~~α-L-amino acid~~ residues, all of which ~~sterically permit the β-strand-forming section of peptide to form a β-strand,~~ have side chains able to form favorable ~~strong~~ non-covalent interactions with neighboring ~~neighbouring~~ side chains of the target β-strand, and at least one of which is ~~an~~ Nα-substituted with an Nα-substituent ~~α-L-amino-acid residue~~, and

(d) any ~~two~~ successive Nα-substituted α-L-amino acid ~~α-L-amino-acid~~ residues are separated by an odd number of consecutive Nα-unsubstituted α-L-amino acid ~~α-L-amino-acid~~ residues, such that the Nα-substituent(s) lie along only ~~the~~ said second edge.

2. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein no two successive Nα-substituted amino acid ~~amino-acid~~ residues in the β-strand-forming section of peptide

are separated by more than 3 consecutive Nα-unsubstituted amino acid ~~amino-acid~~ residues.

3. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein successive Nα-substituted α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand-forming section of peptide are separated from each other by single Nα-unsubstituted α-L-amino acid ~~α-L-amino-acid~~ residues, such that the β-strand-forming section of peptide comprises an alternating sequence of Nα-substituted and Nα-unsubstituted α-L-amino-acid residues.

4. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the Nα-substituent of each Nα-substituted α-L-amino acid ~~α-L-amino-acid~~ residue in the β-strand-forming section of peptide sterically allows or promotes the β-strand-forming section of peptide to form a β-strand, and sterically hinders the association of ~~the~~ said second edge of that β-strand with any other ~~another~~ β-strand.

5. (currently amended) The ~~A~~ chemical compound or composition according to claim 4, wherein the Nα-substituent of each Nα-substituted α-L-amino acid ~~α-L-amino-acid~~ residue in the β-strand-forming section of peptide sterically hinders the action of proteolytic enzymes on the β-strand-forming section of peptide.

6. (currently amended) The ~~A~~ chemical compound or composition according to claim 4, wherein the Nα-substituent of each Nα-substituted α-L-amino acid ~~α-L-amino-acid~~ residue in the β-strand-forming section of peptide is selected from the group consisting of:

a fluorine atom or an OH group;

a group that is connected to the Nα atom by an oxygen atom within said group ~~it~~;

a group that is connected to the Nα atom by a CH2 subgroup within said group ~~it~~;

a methyl or ethyl group, or some other alkyl or aliphatic group;

a substituted or unsubstituted benzyl group, or some other arylmethyl group;

an acetylated or acylated 2-hydroxy-4-methoxybenzyl (AcHmb) group; and

an acylated or unacylated 2-hydroxybenzyl (AcHb/Hb) group.

7. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of each α-L-amino acid ~~α-L-amino-acid~~ residue in the β-strand-forming section of peptide allows or promotes the β-strand forming section of peptide to form a β-strand.

8. (currently amended) The ~~A~~ chemical compound or composition according to claim 7, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand forming section of peptide is that of an amino-acid residue having a β-sheet propensity of greater than 1.00.

9. (currently amended) The ~~A~~ chemical compound or composition according to claim 7, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand forming section of peptide is selected from the group consisting of:

an atom or group that allows or promotes the β-strand-forming section of peptide to associate as a β-strand with the target β-strand and thereby form a stable β-sheet complex; and

an atom or group that forms a hydrophobic or electrostatic interaction, hydrogen bond, or other favorable ~~favourable~~ non-covalent interaction with the neighboring ~~neighbouring~~ side chain of the target β-strand in a β-sheet complex comprising the target β-strand and the β-strand forming section of peptide.

10. (currently amended) The ~~A~~ chemical compound or composition according to claim 7, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand forming section of peptide is selected from the group consisting of:

a hydrophobic group, or a group that has a considerable hydrophobic portion;

a branched or unbranched alkyl or aliphatic group;

a group that is branched at its connecting β-carbon atom;

an aromatic group;

an acidic or basic group; and

an amide- or hydroxyl-containing group.

11. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand-forming section of peptide hinders the stacking of β-sheets.

12. (currently amended) The ~~A~~ chemical compound or composition according to claim 11, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand-forming section of peptide extends beyond the neighboring ~~neighbouring~~ side chains in the β-strand.

13. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand-forming section of peptide allows the compound or composition to be traced or detected.

14. (currently amended) The ~~A~~ chemical compound or composition according to claim 13, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand-forming section of peptide is selected from the group consisting of:

an atom or group that contains a radioactive or magnetically active nucleus;

that of phenylalanine or tyrosine with one or more radioactive or magnetically active iodine or other halogen atoms substituted onto the aromatic ring;

a fluorescent, colored ~~coloured~~, or other spectroscopically detectable group;

a group which contains an unpaired electron and thereby acts as a spin label;

a group which contains the 2,2,5,5-tetramethyl-1-pyrrolidinyloxy (PROXYL) group; and

a group which contains the 2,2,6,6-tetramethyl-1-piperidinyloxy (TEMPO) group.

15. (currently amended) The ~~A~~ chemical compound or composition according to claim 1, wherein the side chain of one or more α-L-amino acid ~~α-L-amino-acid~~ residues in the β-strand-forming section of peptide is selected from the group consisting of the side chain of:

any naturally occurring α-L-amino acid ~~α-L-amino-acid~~ or synthetic derivative thereof; ~~glycine;~~ alanine; serine; cysteine; threonine; valine; leucine; isoleucine; methionine; phenylalanine; tyrosine; tryptophan; glutamine; asparagine; glutamate; aspartate; histidine; lysine; arginine; and *tert*-leucine or β-hydroxyvaline.

16. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the target β-strand is formed by the Alzheimer's Aβ peptide, and the β-strand-forming section of peptide binds specifically as a β-strand to part or all of the KLVFFAE sequence (SEQ ID NO:3) within the target β-strand in the parallel orientation, thereby forming a parallel β-sheet complex wherein consecutive residues of the β-strand-forming section of peptide lie directly opposite consecutive residues of the KLVFFAE sequence in the same order.

17. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the target β-strand is formed by the Alzheimer's Aβ peptide, and the β-strand-forming section of peptide binds specifically as a β-strand to part or all of the KLVFFAE sequence (SEQ ID NO:3) within the target β-strand in the antiparallel orientation, thereby forming an antiparallel β-sheet complex wherein consecutive residues of the β-strand-forming section of peptide lie directly opposite consecutive residues of the KLVFFAE sequence in reverse order.

18. (currently amended) The ~~A~~ chemical compound or composition as claimed in claim 17 wherein the β-strand-forming section of peptide comprises at least a four-residue segment of the amino acid ~~amino-acid~~ sequence aa1-aa2-aa3-aa4-aa5-aa6-aa7, or a mimic thereof, where:

aa1 is α-L-lysine or α-L-arginine;

aa2 is α-L-leucine or α-L-lysine, or an Nα-substituted form thereof;

aa3 is α-L-valine or α-L-isoleucine;

aa4 is α-L-phenylalanine or α-L-tyrosine, or an Nα-substituted form thereof;

aa5 is α-L-phenylalanine or α-L-tyrosine;

aa6 is α-L-alanine, α-L-threonine, α-L-valine, α-L-isoleucine, α-L-leucine, α-L-methionine, α-L-lysine, or α-L-histidine, or an Nα-substituted form thereof;

aa7 is α-L-tryptophan or α-L-glutamate.

19. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide is preceded by, followed by, or otherwise attached to a distinct membrane-penetrating section of peptide which enables the β-strand-forming section of peptide to cross ~~biological barriers such as~~ cell membranes, ~~and~~ the blood-brain barrier or any other biological barrier.

20. (currently amended) The ~~A~~ chemical compound or composition according to claim 19 wherein the side chain of each residue in the membrane-penetrating section of peptide is selected from the group consisting of:

a basic or hydrophobic group; and a side chain of alanine, valine, leucine, isoleucine, methionine, phenylalanine, tyrosine, tryptophan, proline, histidine, lysine, and ~~or~~ arginine.

21. (currently amended) The ~~A~~ chemical compound or composition as claimed in claim 19 wherein the membrane-penetrating section of peptide is made resistant to enzyme-catalysed proteolysis by the

incorporation of α-D-amino acid ~~inclusion of α-D-amino acid~~ residues and/or Nα-substituted amino acid ~~amino acid~~ residues.

22. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide has a free or acylated N terminus and a free, amidated, or esterified C terminus, or forms part of a larger peptide which has a free or acylated N terminus and a free, amidated, or esterified C terminus.

23. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide is attached to another functional component.

24. (currently amended) The ~~A~~ chemical compound or composition according to claim 23, wherein the functional component is selected from the group consisting of:

a component which strengthens the binding of the β-strand-forming section of peptide to the target β-strand;

a component which enhances specificity of association of the β-strand-forming section of peptide with the target β-strand;

a component which enables the β-strand-forming section of peptide to cross ~~biological barriers such as~~ cell membranes, ~~and~~ the blood-brain barrier or any other biological barrier;

a component which causes the compound/composition to target specific organs, cells, or molecules;

a component which allows the compound/composition to be traced or detected;

an atom or group that contains a radioactive or magnetically active nucleus;

a fluorescent, colored ~~coloured~~, or other spectroscopically detectable group;

a group which contains an unpaired electron and thereby acts as a spin label;

a group which contains the 2,2,5,5-tetramethyl-1-pyrrolidinyloxy (PROXYL) group or the 2,2,6,6-tetramethyl-1-piperidinyloxy (TEMPO) group;

a solid matrix, resin, or support;

an enzyme, hormone, antibody, transcription factor, or other protein molecule;

a group that binds specifically to a particular protein; and

a cytotoxic molecule.

25. (currently amended) The chemical compound or composition according to claim 23, wherein attachment of the β-strand-forming section of peptide to the functional component is by means of: an amide or ester linkage formed with the ~~C-terminal carboxyl group~~ C-terminus of the β-strand-forming section of peptide; or ~~N-terminal amino group of the full peptide,~~ an amide linkage formed with the N-terminus of the β-strand-forming section of peptide; or an amide linkage formed with a carboxyl or ~~,~~ amino~~, or hydroxyl~~ group of a side chain within the β-strand-forming section of the ~~full~~ peptide; ~~,~~ or an ester linkage formed with a carboxyl or hydroxyl group of a side chain within the β-strand-forming section of peptide; or ~~by means of~~ a disulphide bridge formed with a thiol group of a side chain within the β-strand-forming section of the ~~full~~ peptide.

26. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 wherein the β-strand-forming section of peptide associates with a target β-strand comprising the amino-acid sequence KLVFF (SEQ ID NO:1) ~~(SEQ. ID. NO. 1)~~.

27. (currently amended) The ~~A~~ chemical compound or composition according to claim 1 comprising one or more components which mimic the structure and action of said β-strand-forming section of peptide, wherein the components are formed by replacing one or more of the backbone peptide groups or side-chain groups of the β-strand-forming section of peptide by another chemical group of similar

stereochemistry and ability to form favorable ~~favourable~~ non-covalent interactions with the target β-strand.

28. (currently amended) The ~~A~~ chemical compound or composition according to claim 27 ~~25~~ wherein:

(a) one or more of the N-unsubstituted backbone peptide groups (CONH) of the β-strand-forming section of peptide is/are each replaced by any ~~one~~ of the following groups: CSNH (thioamide); COO (ester); CSO or ~~,~~ COS (thioester); ~~,~~ CSS (dithioester) ~~(thioester)~~; $COCH_2$ (ketone); $CSCH_2$ (thioketone); SO_2NH (sulphonamide); $SOCH_2$ (sulphoxide); SO_2CH_2 (sulphone); SO_2O (sulphonate); and/or ~~wherein~~

(b) one or more N-substituted backbone peptide groups (CON(R)) of the β-strand-forming section of peptide is/are replaced by one of the following ~~an~~ N- or C-substituted ~~form of one of the following~~ groups: ~~CSNH~~ CSN(R) (thioamide); COCH(R) ~~$COCH_2$~~ (ketone); CSCH(R) ~~$CSCH_2$~~ (thioketone); $SO_2N(R)$ ~~SO_2NH~~ (sulphonamide); SOCH(R) ~~$SOCH_2$~~ (sulphoxide); $SO_2CH(R)$ ~~SO_2CH_2~~ (sulphone), wherein R is equivalent to the original Nα substituent; and/or ~~wherein~~

(c) one or more of the side chains of the β-strand-forming section of peptide is/are each replaced by another group having similar stereochemistry or arrangement of polar and non-polar atoms, maintaining those particular features which are essential for association with the target β-strand.

29 - 42 (cancelled)

43. (previously presented) A pharmaceutical compound or composition according to claim 1.

44 - 45 (cancelled)